



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

C45-13-4
Job Sheet OH198613



Part No: C45-13-4

Job Qty: 1 pcs

Part Name: Keeper



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/31/19

Job Tracking No: Part of OH195119 /piece needs nickel

Due Date: 8/8/19

Created By: Jennifer Renwick

Type: Rework - OH

Description:

Note: DWG C45-13-4 REV 10 IPP REV A 18.02.14 NEW ISSUE FK VERIFY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
160	Outsource - 15 - Nickel Plate	1 pcs	8/8/19	8/8/19			GRO002-VC	5	<i>2019-07-31</i>
165	Packaging 2-2 - Receive - B4B	1 pcs	8/8/19	8/8/19	0.00	0.00	Packaging 2 - 1 - B4B		
							Packaging 2 - 2 - B4B		
							Packaging 2 - 3 - B4B		
							Packaging 2 - 5 - B4B		<i>AUG 08 2019</i>
							Packaging 2 - 4 - B4B		
							Packaging 2 - 6 - B4B		
							Packaging 2 - 7 - B4B		
							Packaging 2 - 8 - B4B		
							Packaging 2 - 9 - B4B		
							Packaging 2 - 10 - B4B		
							Packaging 2 - 11 - B4B		
							Packaging 2 - 12 - B4B		
							Packaging 2 - 13 - B4B		
							Packaging 2 - 14 - B4B		
							Packaging 2 - 15 - B4B		
							Packaging 2 - 16 - B4B		
							Packaging 2 - 17 - B4B		
							Packaging 2 - 18 - B4B		
							Packaging 2 - 19 - B4B		
							Packaging 2 - 20 - B4B		
							Packaging 2 - 21 - B4B		
							Packaging 2 - 22 - B4B		
							Packaging 2 - 23 - B4B		
							Packaging 2 - 24 - B4B		
							Packaging 2 - 25 - B4B		
							Packaging 2 - 26 - B4B		
							Packaging 2 - 27 - B4B		
							Packaging 2 - 28 - B4B		
							Packaging 2 - 29 - B4B		



Container No: S202011



Part: C45 - 13 - 4
Job No: OH198613
Serial No/Batch: S202011

Revision: 10

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 08/08/19

Plex 7/31/19 11:46 AM Dart.Renwick.Jennife

				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
180 QC 6	1 pcs	8/8/19	0.00 0.00	QC 6 - 9	
				QC 6 - 68	DAS
				QC 6 - 61	81
				QC 6 - 40	9-89
				QC 6 - 81	
190 Packaging 3-1 - Stock - B4B	1 pcs	8/8/19	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
200 QC 21 - SA	1 pcs	8/8/19	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 53	
Part Op 160 - (Outside Processing - Nickel Plate) -Issue P/O; <u>44464</u> -All noncertified parts specifying a finish of Nickel Descriptions: Plating per QQ-N-290, or parts with drawings that are missing a specification Can be Nickel Plated per ASTM B733 Type 4/5, SC0-SC4 or MIL-C-26074 Class 1/2 -Material type; 4140/4142 -Heat treat must be carried out to specified hardness if noted on the drawing. -Plating thickness must be carried out as specified on the drawing. -Certificate of Conformity is required 165 - (Receive & Inspect for Damage & Mat'l Certs) 180 - (QC6- All purchased or subcontracted products) 190 - (Identify as per dwg & Stock Location: _____) 200 - (QC21- Final Inspection - Work Order Release)					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MISC	MISCELLANEOUS	1 Ea (1 ea)	160-Outsource - 15 - Nickel Plate	5201975

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
160-Outsource - 15 - Nickel Plate	MISC	1	98	0

Part Specifications

Specifications could not be found.

Plex 7/31/19 11:46 AM Dart.Renwick.Jennifer

04195119

* Missed C45-13-4
When sent out for NP
Sending separate.

210 DC - 1 - B4B	1 pcs	6/27/19	0.00 0.00	Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
220 QC 21 - FG	1 pcs	6/27/19	0.00 0.00	Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
				DC - 1 - B4B	
				DC - 2 - B4B	
				QC 21 - FG - 21	
				QC 21 - FG - 70	
				QC 21 - FG - 53	

Part Op 110 - Issue S/N

Descriptions: 115 - TEST ASSEMBLY. DISASSEMBLE ASSEMBLY. INSPECT DAMAGE PART.

120 - (QC5- Inspect part completeness to step on W/O)

140 - LIQUID PENETRANT INSPECTION AS PER QSI 038

150 - (Receive & Inspect for Damage & Mat'l Certs)

160 - Triage parts to be sent out for plating

165 - Prepare for nickel plate

170 - (QC5- Inspect part completeness to step on W/O)

175 - Issue P/O; _____ -Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004- .0006 -Bake after plating -Material type; 4140 -Certificate of Conformity is required

185 - (QC6- All purchased or subcontracted products)

190 - RE-ASSEMBLE. ***All assembly to be done in accordance with manual*** TEST ASSEMBLY.

195 - (QC5- Inspect part completeness to step on W/O)

200 - (Identify as per dwg & Stock Location: _____)

210 - Photocopy blue file and create labels

220 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
C45-AR	C-Series Remote Hook 4,500 lbs Lift Capacity	1 Ea (1 ea)	110-External Load - 1	5174878
188-FPSS-1/4-20-3/8	Set Screw	2 Ea (2 ea)	190-External Load - 4 - B4B	5048557
188-FSCS-1032-5/8	Flat socket cap Screw	4 Ea (4 ea)	190-External Load - 4 - B4B	5196435
2595K2	Heat Shrink	1 ft (1 ea)	190-External Load - 4 - B4B	5049360
32448	16-14 AWG Knife Connector	2 Ea (2 ea)	190-External Load - 4 - B4B	5041618
600.1309-A	Label	1 pcs (1 ea)	190-External Load - 4 - B4B	
600.1312	Caution Sticker	1 pcs (1 ea)	190-External Load - 4 - B4B	5098056
AN4-24A	Bolt	2 Ea (2 ea)	190-External Load - 4 - B4B	5130326
AN5-21A	Bolt	4 Ea (4 ea)	190-External Load - 4 - B4B	5097081-1
C10-41	Strain Relief Connector	1 Ea (1 ea)	190-External Load - 4 - B4B	
C2-14-2	Label Rivets	2 Ea (2 ea)	190-External Load - 4 - B4B	
C45-1-1	Manual Knob Release	1 pcs (1 ea)	190-External Load - 4 - B4B	
C45-10-1	Lock Spring Pin	1 Ea (1 ea)	190-External Load - 4 - B4B	5040658
C45-10-2	Lock Spring	1 pcs (1 ea)	190-External Load - 4 - B4B	5177837
C45-11-1	Sideplate, Solenoid Side	1 pcs (1 ea)	190-External Load - 4 - B4B	
C45-11-2	Locating Pin	2 Ea (2 ea)	190-External Load - 4 - B4B	5097709
C45-12-1	Lock Bushing	2 pcs (2 ea)	190-External Load - 4 - B4B	5179711
C45-12-2	Lock Shaft	1 pcs (1 ea)	190-External Load - 4 - B4B	
C45-12-3	Lock	1 pcs (1 ea)	190-External Load - 4 - B4B	
C45-12-4	Lock Roller	1 pcs (1 ea)	190-External Load - 4 - B4B	
C45-12-5	Lock Roller Pin	1 pcs (1 ea)	190-External Load - 4 - B4B	9103112
C45-12-6	Retaining Ring	2 Ea (2 ea)	190-External Load - 4 - B4B	5029303
C45-13-1	Keeper Bushing	2 pcs (2 ea)	190-External Load - 4 - B4B	5182323
C45-13-2	Teflon Keeper, Spacer	2 Ea (2 ea)	190-External Load - 4 - B4B	5029305

	C45-13-3	Keeper Shaft	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-13-4	Keeper	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-13-5	Keeper Spring	1 pcs (1 ea) 190-External Load - 4 - B4B	5172439
	C45-2-1	Sideplate - MRK	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-3-1	Radial Bearing	2 Ea (2 ea) 190-External Load - 4 - B4B	5060134
	C45-3-10	Latch Shaft	1 pcs (1 ea) 190-External Load - 4 - B4B	
OK	C45-3-11	Actuator	1 pcs (1 ea) 190-External Load - 4 - B4B	5165546
	C45-3-12	Latch Roller Bearing	1 Ea (1 ea) 190-External Load - 4 - B4B	5091768
	C45-3-2	Latch Roller Pin	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-3-2-1	Snap Ring	2 Ea (2 ea) 190-External Load - 4 - B4B	5097898
	C45-3-3	Latch Roller	1 pcs (1 ea) 190-External Load - 4 - B4B	
OK	C45-3-4	Pin	2 pcs (2 ea) 190-External Load - 4 - B4B	5133668
	C45-3-4-1	Retaining Ring	4 Ea (4 ea) 190-External Load - 4 - B4B	5114803
	C45-3-5	Teflon Spacer	2 Ea (2 ea) 190-External Load - 4 - B4B	5097745
	C45-3-6	Latch	1 pcs (1 ea) 190-External Load - 4 - B4B	
P OK	C45-3-7	Link	1 pcs (1 ea) 190-External Load - 4 - B4B	5029322
	C45-3-8A	Actuator Shaft Bushing	1 pcs (1 ea) 190-External Load - 4 - B4B	5078570
	C45-3-8B	Actuator Shaft Bushing	1 pcs (1 ea) 190-External Load - 4 - B4B	5163197
	C45-3-9	Lever Spring	1 pcs (1 ea) 190-External Load - 4 - B4B	5190299
PO	C45-4-1	Trunnion Bushing	2 pcs (2 ea) 190-External Load - 4 - B4B	5122724
	C45-4-4A	C45 Load Beam Assembly	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-4-5	Loadbeam Spacer	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-5-1	Lever Stop Pin	1 Ea (1 ea) 190-External Load - 4 - B4B	5089113
	C45-5-2	Lever Stop	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-7-1	LOADBEAM BUMPER	1 pcs (1 ea) 190-External Load - 4 - B4B	5177835
	C45-7-2	Lock Bumper	2 pcs (2 ea) 190-External Load - 4 - B4B	5179118
	C45-8-1-2	Solenoid Nut	2 pcs (2 ea) 190-External Load - 4 - B4B	
OK	C45-8-2	Solenoid	1 pcs (1 ea) 190-External Load - 4 - B4B	5193988
N	C45-8-4	Solenoid Cover Gasket	1 pcs (1 ea) 190-External Load - 4 - B4B	5199513
OK	C45-8-5	Solenoid Cover	1 pcs (1 ea) 190-External Load - 4 - B4B	5175959
	C45-9-1	Clock Spring Cover	1 pcs (1 ea) 190-External Load - 4 - B4B	
	C45-9-2	Clock Spring	1 pcs (1 ea) 190-External Load - 4 - B4B	
	EL-PLUG-M	3-Prong Male Spade Plug	1 Ea (1 ea) 190-External Load - 4 - B4B	
	EL314-SJTOW	Long Line Electrical Wire, 14/3 Gauge replace w/t 01004-08-047	1 ft (1 ea) 190-External Load - 4 - B4B	5179682
	MS21044N5	Nut	4 Ea (4 ea) 190-External Load - 4 - B4B	5192486
	MS27039-4-08	Screw	1 Ea (1 ea) 190-External Load - 4 - B4B	5097087-1
	NAS1149F0463P	Washer	3 Ea (3 ea) 190-External Load - 4 - B4B	5097088-1
	NAS1149F0563P	Washer	8 Ea (8 ea) 190-External Load - 4 - B4B	5184942

Customer

RAG03 / ORDER 13861

Date _____

2019/05/13

Part Numbe

C45

Serial Number

CNAM1057-C

RA603

Job : ~~04194031~~

Additional Recommended Replacement Parts

04195119 gr

Part Number to Replace

Customer Approval

(1) C45-3-11 ACTUATOR



(1) c45-3-7P LINK

(2) C45-3-4 LINK PIN

☒

(1) C45-12-5 LOCK ROLLER P.W



(1) C45-8-2 SELENOID

☒

(i) C45-8-5 SEL. COVER ??

☒☐

1

☐☐

Inspected By

ALAN PATRY



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB044164



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB044164

PO Date: 7/31/19

Due Date: 8/6/19

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

E-MAILED
2019-08-20

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	OH198613	C45-13-4	Keeper (Outside Processing - Nickel Plate) -Issue P/O; -All noncertified parts specifying a finish of Nickel Plating per QQ-N-290, or parts with drawings that are missing a specification Can be Nickel Plated per ASTM B733 Type 4/5, SC0-SC4 or MIL-C-26074 Class 1/2 -Material type; 4140/4142 -Heat treat must be carried out to specified hardness if noted on the drawing. -Plating thickness must be carried out as specified on the drawing. -Certificate of Conformity is required	Firmed	-	8/6/19	1 pcs	0 pcs	1 pcs	\$300.00/pcs	\$300.00

1 X

AUG 08 2019

Line Item Note Re-work - to be stripped & re-plated

Grand Total: \$300.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB044164



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 8/1/19 4:08 PM Dart.Guerin.Kimberley



Certificat de Conformité / Certificate of Compliance

(021207-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

021207 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
02-Aug-2019		Jigar Patel		POHB044164 ✓				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	C45-13-4 ✓ Rev.	C45-13-4 STRIP AND REPLATE E-NIC STEEL 200 [E-NICKEL STEEL 200] ASTM B733 TYPE 4/5, SC0- SC4 OR MIL-C-26074 CLASS 1/2 0.0004 - 0.0006 THICK BAKE AFTER	E-NICKEL-200 CH	1	1	0	0	0
2	STRIP CHARGE Rev.	STRIP CHARGE STRIP [STRIP]	STRIP CH	1	1	0	0	0
3	BAKING CHARGE Rev.	BAKING CHARGE 01 -BAKING, HYDROGEN EMBRITTLEMENT RELIEF	BAKE MIN-CHG	1	1	0	0	0

RECEIVED
 AUG 07 2019
 DART AEROSPACE LTD.

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Jf JAY

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.